

**INCREASING THERMAL CONDUCTIVITY OF HOST POLYMER USED  
WITH LASER ENGRAVING METHODS AND COMPOSITIONS**

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Abstract of the Disclosure

the invention provides a composition having laser engraving properties, comprising a host material and a laser enhancing additive. The host material comprises a material, such as a polymer, modified by a first process, whereby the host material as modified by the first process has increased thermal conductivity as compared to the host material before the first process. The laser enhancing additive comprises a first quantity of at least one of copper potassium iodide ( $\text{CuKI}_3$ ), Copper Iodide ( $\text{CuI}$ ), potassium iodide ( $\text{KI}$ ), sodium iodide ( $\text{NaI}$ ), and aluminum iodide ( $\text{AlI}$ ), and a second quantity of at least one substance selected from the group consisting of zinc sulfide ( $\text{ZnS}$ ), barium sulfide ( $\text{BaS}$ ), alkyl sulfonate, and thioester.